REMARKS

Claims 1-15 and 17-20 are pending. Claim 1 has been amended. The amendment merely clarifies elements that were already present in the claims (see, e.g., claims 1, 3) and is supported throughout the specification as originally filed (e.g., Figures 4-7; page 9, line 9, through page 12, line 13). As such, no new matter has been added by this amendment to claim 1.

It is submitted that the amendments do not require a new search or consideration because the amendments merely clarify the claimed subject matter, including subject matter that was already present in the claims (see, e.g., claims 1, 3), and therefore do not change the subject matter under consideration. The amendments do not add more claims than were finally rejected and, it is submitted, place the claims in condition for allowance, or in better condition for appeal. As such, it is respectfully requested that the amendments be entered.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-3, 13-15, 17, and 19-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chishti in view of Yamani.

Although Applicant respectfully disagrees with the rejections and does not acquiesce to any reasoning provided by the Examiner, claim 1 has been amended in order to further expedite prosecution of the present case. As amended, claim 1 is directed to a computer-implemented method for generating a computer model of one or more teeth, comprising receiving as input a digital data set of meshes representing the teeth, compressing the digital data set to generate a compressed digital data set, the compressing comprising selecting a curved coordinate system with mappings to and from a 3D space, generating a function in the curved coordinate system to represent each tooth, and rendering a graphical representation of the teeth using the compressed digital data set, wherein the rendering comprises rendering the teeth at a selected one of multiple orthodontic-specific viewing angles. Applicant submits that those elements of claim 1, which are incorporated in each of dependent claims 2, 3, 13-15, 17, and 19-20, are missing from the cited references, thereby precluding *prima facie* obviousness.

In particular, Applicant submits that at least the features of "compressing the digital data set to generate a compressed digital data set", as recited in claim 1, is not taught or suggested by Chishti or Yamani, considered individually or in combination. The cited references certainly fail to teach compressing the digital data set comprising selecting a curved coordinate system with mappings to and from a 3D space, and generating a function in the curved coordinate system to represent each tooth, as recited in claim 1.

Chishti teaches a system for repositioning teeth comprising a plurality of individual appliances, wherein the teachings of Chishti include computer modeling, including producing a digital data set representing tooth arrangements. Rather than compressing a digital data set, as recited in current claim 1, Chishti teaches representing a data set at a lower resolution in order to reduce the computer time necessary to generate images (see, e.g., Chishti, col. 10, lines 52-53).

Applicant submits that representing a data set at a lower resolution, as taught by Chishti, is distinctly different from "data compression" both as the term is generally understood in the art, as well as the methods of data compression disclosed in the current specification and recited in the present claims. See, e.g., data compression techniques disclosed at page 9, line 9, to page 11, line 8 of the present specification. Moreover, in contrast to the teachings of Chishti, the data compression according to the methods of the present invention is capable of specifically maintaining high resolution of the digital data model. See, e.g., FIG. 7; page 12, lines 6-13. The compression of the digital data set according to the methods of the present invention provides the advantages of reduction in file size, as well as storage and transmission requirements, while maintaining good quality and high image resolution. These data compression techniques are not taught or suggested in Chishti or in Yamani.

Yamani teaches a system to obtain a record of a patient's occlusion using computer vision, where data acquisition is obtained using an intraoral video camera. However, Yamani does not teach compressing a digital data set to generate a compressed digitial data set and, therefore, does not provide the advantages of reducing the amount of data storage space required for storing and communicating teeth treatment information, utilizing space more efficiently, reducing the cost of the system, improving the responsiveness of the system, and allowing

additional functionality to be implemented, according to the method defined by current claim 1. See, e.g., page 3, lines 3-7 of the present specification.

Thus, for the reasons set forth above, Applicant submits that no reasonable combination of Chishti and Yamani would teach or suggest the invention as recited in claim 1, thereby precluding *prima facie* obviousness. MPEP §§ 2141-2143. In particular, neither Chishti nor Yamani, alone or in combination, teach compressing the digital data set to generate a compressed digital data set, as set forth in current claim 1.

Accordingly, withdrawal of the rejections of claims 1-3, 13-15, 17, and 19-20 under 35 U.S.C. §103(a) is respectfully requested.

Claims 4-8 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chishti in view of Yamani and further in view of Official Notice.

As set forth above, no reasonable combination of Chishti and Yamani would teach or suggest the invention as recited in claim 1. For example, neither Chishti nor Yamani, alone or in combination, teach compressing the digital data set to generate a compressed digital data set, as set forth in current claim 1. The Official Notice does not provide the teachings that are missing from Chishti and Yamani.

Accordingly, withdrawal of the rejections of claims 4-8 and 18 under 35 U.S.C. §103(a) is respectfully requested.

Claims 9-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chishti in view of Yamani and further in view of Bourke.

As set forth above, no reasonable combination of Chishti and Yamani would teach or suggest the invention as recited in claim 1. For example, neither Chishti nor Yamani, alone or in combination, teach compressing the digital data set to generate a compressed digital data set, as set forth in current claim 1. Bourke does not provide the teachings that are missing from Chishti and Yamani.

Accordingly, withdrawal of the rejections of claims 9-12 under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

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